

Amendment to the Title:

Please change the title to “METHOD OF CHARGE PROCESSING”.

Amendments to the Specification:

Enclosed herewith is a document which shows the paragraph-by-paragraph amendments to the specification. Additionally enclosed is a clean replacement specification which shows only new language and does not show deleted language. This method of revision to the specification is in accordance with MPEP 608.01(q) and 37 C.F.R. §1.125. On information and belief, no new matter has been added.



## METHOD OF CHARGE PROCESSING

### BACKGROUND OF THE INVENTION

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**GROUP 3600**

5 [0001] 1. Field of the Invention

[0002] The present invention relates to a method of charge processing for services realized by an electronic appliance. In particular, the present invention relates to a method of charge processing for the partial use of an electronic appliance, such as use of a function, an operation  
10 button or storage media of an electronic appliance.

[0003] 2. Description of the Related Art

[0004] In the past, there was no method of charge processing for the partial use of an electronic  
15 appliance. Below is described various types services realized or implemented by an electronic appliance. Moreover, a conventional method of charge processing for such services will be described below.

[0005] From the past, services have been provided by use of an electronic appliance. For  
20 example, as shown in FIG. 4, service providers have been providing fee-based TV broadcasting, and rental services for videos, DVD's and CD's. Further, Internet service providers or the like have been providing Internet connections; information services via cellular phones, PDA's, car navigations or the like; and online games.

25 [0006] The conventional method of charge processing is as follows: In the case of pay television or the like, a monthly TV subscription fee is fixed in advance for charge processing. In the case of video rentals, the fee is charged over the counter at the time of the rental. In the case of information service providers via cellular phones or the like, a common carrier charges a communication fee together with the respective information fee, which is designated by the  
30 information service provider, and collects the fee from the user as an agent of such information

service provider.

## SUMMARY OF THE INVENTION

5 [0007] According to the conventional method of charge processing, the respective service provider charges a fee for each of its services. In the case of an interactive multimedia service terminal or the like having plurality of services customized to each service terminal, many types of charge processing are needed for one service terminal so that charge processing in itself becomes rather complicated.

10 [0008] In the past, it was necessary to carry out charge processing as per type of services on a multimedia terminal, i.e., per type of services such as telephone, Internet, television, video-on-demand, news-on-demand, music-on-demand, online shopping, online karaoke, electronic settlement, home banking, electronic commerce, home trade, home medical care, online games,  
15 multimedia newspapers, and public services such as issuance of residence cards. Accordingly, it was rather difficult for the conventional method of charge processing to effectively process these services.

[0009] Moreover, where there are content providers, a common carrier, and a device provider,  
20 and the like, each providing services, it was difficult to divvy up the profit from the service charge collected for such services according to the respective types of service providers. Further, it was difficult for advertisers to install dedicated playback devices for commercials, or to install dedicated functions or buttons on electronic appliances for commercials in a household environment.

25 [0010] In order to solve these problems, the present invention provides a method of charge processing by means of using a computation formula to compute the charge according to the use of a function on an electronic appliance for realizing the service by a user, the use of an operation button on an electronic appliance, and the use of storage media of an electronic appliance.

## BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 illustrates a method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an electronic appliance.

[0012] FIG. 2 is a flowchart for the method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an electronic appliance.

[0013] FIG. 3 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for calculating the charge for the use of an electronic appliance.

[0014] FIG. 4 is a conceptual diagram for illustrating various types of services realized by an electronic appliance.

[0015] FIG. 5 illustrates a method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of a function of an electronic appliance.

[0016] FIG. 6 is a flowchart of the method of charge processing according to the present invention, by uses a computation formula for computing the charge for the use of a function of an electronic appliance.

[0017] FIG. 7 illustrates a charge processing apparatus and the functions thereof according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of a function.

[0018] FIG. 8 illustrates a method of charge processing according to the present invention,

which uses a computation formula for computing the charge for the use of an operation button of an electronic appliance.

[0019] FIG. 9 is a flowchart of the method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of an operation button of an electronic appliance.

[0020] FIG. 10 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of an operation button on an electronic appliance.

[0021] FIG. 11 illustrates a method of charge processing according to the present invention, which uses a computation formula for computing the charge for the use of storage media of an electronic appliance.

[0022] FIG. 12 is a flowchart for carrying out charge processing according to the present invention by means of using a computation formula for computing the charge for the use of storage media of an electronic appliance.

[0023] FIG. 13 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of using a computation formula for computing the charge for the use of storage media of an electronic appliance.

[0024] FIG. 14 shows parameters for a computation formula for computing the respective charge for the use of a function of an electronic appliance, the use of a button of an electronic appliance, and the use of a disk of an electronic appliance according to the present invention.

[0025] FIG. 15 illustrates a method of charge processing in respect to an administrator according to the present invention, which uses a computation formula for computing the charge for the installation of an electronic appliance.

[0026] FIG. 16 is a flowchart of charge processing according to the present invention, which computes the charge for the installation of an electronic appliance in respect to an administrator of an electronic appliance.

5 [0027] FIG. 17 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by computing the charge for the installation of an electronic appliance in respect to an administrator of an electronic appliance.

[0028] FIG. 18 illustrates a method of charge processing according to the present invention,  
10 which computes the charge for a built-in function of an electronic appliance in respect to an administrator of an electronic appliance.

[0029] FIG. 19 is a flowchart of charge processing according to the present invention, which computes the charged for a built-in function of an electronic appliance in respect to an  
15 administrator.

[0030] FIG. 20 illustrates a charge processing apparatus according to the present invention, which carries out charge processing by means of computing the charged for a built-in function of an electronic appliance in respect to an administrator of an electronic appliance.

20 [0031] FIG. 21 illustrates a method of charge processing according to the present invention, which carries out charge processing by means of computing the charged for the installation of a button in respect to an administrator of an electronic appliance.

25 [0032] FIG. 22 shows a flowchart of a method of charge processing according to the present invention, which computes the charge for the installation of a button of an electronic appliance in respect to an administrator of an electronic appliance.

[0033] FIG. 23 illustrates a charge processing apparatus according to the present invention,  
30 which carries out charge processing by means of computing the charged for the installation of a

button in respect to an administrator of an electronic appliance or a remote controller.

[0034] FIG. 24 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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[0035] FIG. 25 is a flowchart of one embodiment of a charge processing system according to the present invention.

[0036] FIG. 26 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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[0037] FIG. 27 is a flowchart of one embodiment of a charge processing system according to the present invention.

[0038] FIG. 28 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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[0039] FIG. 29 is a flowchart of one embodiment a charge processing system according to the present invention.

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[0040] FIG. 30 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

[0041] FIG. 31 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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[0042] FIG. 32 is a functional block diagram of one embodiment of a charge processing system according to the present invention.

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## DESCRIPTION OF THE PREFERRED EMBODIMENT

[0043] A method of charge processing for services realized by an electronic appliance may be applicable to the following cases of: (1) charging a fee for the use of an electronic appliance; (2) charging a fee for the use of a function of an electronic appliance; (3) charging a fee for the use of an operation button of an electronic appliance; and (4) charging a fee for the use of a disk, which is an information storage medium of an electronic appliance.

[0044] Further, there is the case of charging a fee for the rental of an electronic appliance in addition to the case of charging a fee for the service in itself. This is the case of charging a fee in respect to a service provider, wherein said service provider leases an electronic appliance, a function of an electronic appliance, an operation button for operating an electronic appliance, and/or a disk, which is a storage medium of an electronic appliance. Then, the service provider customizes them at its discretion according to the services so provided by a means for providing services to a terminal user. In this case, it is convenient to charge the service provider for such rental.

[0045] First, below is described an embodiment according to the present invention, which carries out charge processing for the use of an electronic appliance. FIG. 1 illustrates a structure of a method of charge processing according to the present invention. An electronic appliance of the present invention includes a multimedia terminal or the like, and an electronic appliance comprising a part of a multimedia terminal. An electronic appliance comprising a part of a multimedia terminal includes a screen display device, a disk as a storage medium, a remote controller button, VRAM (Video RAM), a network interface, or the like of a multimedia terminal. Further, a network interface includes a modem such as an Ethernet interface, a V90 modem and the like, an IEEE 1394 interface, a DV (Digital Video) terminal, a SD card interface and the like. By using these apparatuses or devices, differentiated services can be so provided. Further, the method of charge processing according to the present invention comprises a means for storing computation formulas, and a step of computing a charge. The means for storing computation formulas stores a computation formula for computing the charge for the use of an electronic

appliance. There may be one or more computation formulas. Further, it may be easily changed or substituted by means of an electronic process. A computation formula to be used herein is selected according to the service provided by an electronic appliance. If the electronic appliance provider, and the charge processor are the same entity, information is readily available in respect to what services have been realized and provided to each electronic appliance, and how the electronic appliance has been used. Further, even if they are different, information is obtainable in respect to what services are realized and provided to each electronic appliance, and how the electronic appliance is used in advance by carrying out electronic processing or charge processing via online. Accordingly, it is rather easy to select an appropriate computation formula.

[0046] The step for computing a charge computes a charge on the basis of the computation formula stored in the means for storing computation formulas. One or more of computation formulas may be used herein. Further, depending on the need of the computation formula used, the information relating to the use of an electronic appliance may also be used therein.

[0047] For example, if the electronic appliance is a screen display device, the specific parameters used in the computation formula include information relating to the location of the screen being used, the size thereof, the arrangement sequence of information displayed on the screen, and the like. If the electronic appliance is a storage medium, the specific parameters used in the computation formula include information on the amount of use. If the electronic appliance is an operational button on a remote controller, the specific parameters used in the computation formula include information relating to the location of the button on the remote controller, the size of the button, and the like. If the electronic appliance is a VRAM, the specific parameters used in the computation formula include information relating to the size thereof and the like. If the electronic appliance is a network interface, the specific parameters used in the computation formula include information on its type, the transmission rate thereof, and the like. If the network interface also has an encryption capability, the specific parameters used in the computation formula include a flag as to whether encryption is used or not. Further, the number of electronic appliances, which is used as such by way of connection to the interface, is also used as a parameter in the computation formula.

[0048] FIG 2 is a flowchart of one embodiment according to the present invention. At first, the process involves waiting until the information for charge processing is inputted (S201). If it is inputted, then the information relating to the use of an electronic appliance is obtained (S202). Nevertheless, the information relating to the use of the electronic appliance is not always needed. If the information relating to the use of an electronic appliance is standardized, it is possible to select a computation formula and to carry out charge processing without using this information in the step of computing the charge using said calculation formula.

[0049] By using this information or the like, a computation formula is extracted from the means for storing computation formulas, with which computes the charge for the use of an electronic appliance (S203). On the basis of the computation formula extracted in the above step and the above information, the charge is then computed (S204).

[0050] FIG 3 is a functional block diagram of one embodiment of a charge processing apparatus 302 according to the present invention. As shown in FIG. 3, the information relating to the use of the service realized by an electronic appliance 301 is transmitted from a transmission unit 303, which is provided in the electronic appliance 301, to the charge processing apparatus 302. In the charge processing apparatus 302, a reception unit 304 receives this information relating to the use of the service realized by an electronic appliance 301. On the basis of this information, the means for obtaining a computation formula 307 in the charge computation processor 306 acquires the optimum computation formula from the storage unit 305 for computation formulas, and carries out arithmetical processing by using this computation formula at the charge computation processor 306 in order to compute the charge therein. A user (chargee) for the charging purposes is specified, and the payment is processed in respect to the computed charge by means of a payment method such as electronic settlement. Further, the charge amount, and the information used in computing the charge are transmitted to the chargee via e-mail or the like.

[0051] Thus, the present invention enables charge processing, which can be easily carried out electronically, thereby enabling daily or hourly charge processing instead of conventional

monthly processing. Accordingly, the present invention enables charge processing in accordance with the updates and changes in services so provided by an electronic appliance.

[0052] Below is described an embodiment for charge processing for the use of a function of an electronic appliance. According to the present invention, the charge for the service realized by using the function of the electronic appliance is processed according to the charge for the use of such function.

[0053] FIG. 5 illustrates an embodiment of a method of charge processing according to the present invention. The method of charge processing according to the present invention comprises a means for storing computation formulas, and a step of computing a charge. The embodiment is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, serves as a means to compute the charge for the use of a function realized by an electronic appliance. As shown in FIG. 5, assuming that the electronic appliance has Functions 1 to 3, if a user receiving the service by this electronic appliance receives the service by way of Function 2, the charge is processed for the use of Function 2. A function is a means for realizing the service provided through this electronic appliance. An electronic appliance is equipped with functions providing various types of services, such as telephone, Internet, television, video-on-demand, news-on-demand, music-on-demand, on-line shopping, online karaoke, electronic settlement, home banking, electronic commerce, home trade, home medical care, online game, multimedia newspapers, and public services such as issuance of residence cards. Hence, an user can receive these types of services by the above functions for example.

[0054] In this case, as a specific example of a computation formula, 50 Yen may be charged for the use of online karaoke of Function 1, 20 Yen for the use of electronic settlement of Function 2, and 30 Yen for the use of home banking of Function 3.

[0055] It is assumed that a user of an electronic appliance implements for enjoyment a service such as video-on-demand by means of Function 2 as shown in FIG. 5. In this case, as shown in FIG. 5, on the basis of the computation formula for computing the charge for the use of Function

2 obtained from the means for storing computation formulas, the method of charge processing computes the charge for the service such as for video-on-demand. On the basis of the computation formula stored in the means for storing computation formulas, the charge is computed in the step of computing the charge.

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[0056] In this case, Functions 1 and 3 are not used, so that they are not the objects of charge. FIG. 6 is a flowchart of an embodiment according to the present invention. The method involves waiting until there is an input for charge processing (S601), and upon input, the information relating to the use of an electronic appliance is obtained (S602). The information relating to the use of an electronic appliance includes information relating to the function used by the electronic appliance. Then, a function identifier for identifying the used function is obtained (S603). This function identifier is used for associating the used function with the computation formula for computing the charge for the use of said function. Next, the corresponding computation formula, which computes the charge for the use of said electronic appliance, is extracted from the means for storing computation formulas (S604). Then, on the basis of the computation formula extracted in the above step, and the information relating to said use, the charge thereof is computed (S605).

[0057] Further, if a plurality of functions is used, the charge may be computed by using a plurality of computation formulas, or by using a computation formula predetermined for the purposes for the use of a plurality of functions. FIG. 7 illustrates the functions of an electronic appliance 701, and the charge processing apparatus 702. As shown in FIG. 7, the electronic appliance 701 has a plurality of functions for implementing a plurality of services, i.e., Functions 1 to 3 (703, 704 and 705). Further, the electronic appliance 701 has a transmission unit 706 for transmitting information relating to the use of an electronic appliance 701, including that relating to the use of the functions, to the charge processing apparatus 702.

[0058] As shown in FIG. 7, the charge processing apparatus 702 according to the present invention comprises a reception unit 707 for receiving information relating to the use of an electronic appliance 701 from the electronic appliance 701. On the basis of the information

relating to the use of an electronic appliance 701 received by the reception unit 707, the means 710 for obtaining a computation formula in the charge computation processor 709 selects the computation formula for computing the charge for the use of the function from the storage unit 708 for computation formulas.

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[0059] The reception unit 707 of a charge processing apparatus 702 need not directly receive information from the transmission unit 706 of an electronic appliance 701; it may indirectly receive information from the transmission unit 706 of an electronic appliance 701. Further, with or without being processed with necessary information, the information relating to the use of an electronic appliance 701, which is transmitted from the transmission unit 706 of an electronic appliance 701, may be transmitted to the charge processing apparatus 702. The necessary information as above includes a variety of information relating to the user receiving the service by way of an electronic appliance 701, the information on the number of views of banner advertisements, and the like. Moreover, the charge may be determined by using these information during charge processing. For example, in response to the number of views of banner advertisements, the discount rate or amount may be changed accordingly.

[0060] Below is described an embodiment according to the present invention, which carries out charge processing for the use of an operation button of an electronic appliance, which is illustrated in FIG. 8. As in other embodiments, the method of charge processing according to the present invention comprises a means for storing computation formulas, and a step for computing a charge. As compared to other embodiments of the present invention, the embodiment herein is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, computes the charge for the use of an operation button of an electronic appliance.

[0061] The operation button as above operates the function of an electronic appliance implementing various types of services. When the operation button is turned on, it starts a service or a set of services. For example, by turning on an operation button, it may be possible to access a specific homepage on the Internet, which is not generally open to the public, or to trade stocks



online.

[0062] FIG. 9 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S901), and if there is an input, then the information relating to the use of an electronic appliance is obtained (S902). The information relating to the use of an electronic appliance includes information relating to the use of an operation button of an electronic appliance. Then, an operation button identifier for identifying the used operation button on the electronic appliance is obtained (S903). The operation button identifier is used for associating the used operation button with the computation formula for computing the charge in the step of computing a charge. Next, the corresponding computation formula, which computes the charge for the use of an electronic appliance, is extracted from the means for storing computation formulas (S904). Then, on the basis of the computation formula extracted in the above step, and the information relating to the use of an operation button, the charge is computed therein (S905).

[0063] For example, there may be a computation formula, which in effect charges 10 Yen per operation of the button, i.e.,  $\text{Charge} = n \times 10 \text{ Yen}$ , wherein  $n$  is the number of times of button operations. Further, there may be a computation formula, which in effect charges 20 Yen per operation of the button when the number of times of button operations is up to 10, and charges 10 Yen per operation of the button when the number of times of button operations is 11 or more.

[0064] FIG. 10 illustrates an electronic appliance 1001, and a charge processing apparatus 1002 according to the present invention. As shown in FIG. 10, an electronic appliance 1001 comprises at least one of operation buttons (1003, 1004 and 1005). The information relating to the use of an operation button is transmitted from the transmission unit 1006 of an electronic appliance 1001 to the reception unit 1007 of a charge processing apparatus 1002. The charge processing apparatus 1002 comprises a reception unit 1007, a charge computation processor 1009, and a storage unit 1008 for computation formulas. The reception unit 1007 receives information relating to the use of an electronic appliance 1001, including information relating to the use of the operation buttons (1003, 1004 and 1005), which is directly or indirectly transmitted from the

electronic appliance 1001. The charge computation processor 1009 receives this information, and extracts information necessary to obtain the computation formula, which is stored in the storage unit 1008 for computation formulas. The storage unit 1008 for computation formulas stores the computation formula for computing the charge for the use of these operation buttons (1003, 1004 and 1005). Further, the means 1010 for obtaining a computation formula in the charge computation processor 1009 obtains this computation formula, and computes the charge by using the same.

[0065] Below is described an embodiment according to the present invention for carrying out charge processing for the use of a disk, which is an information storage medium of an electronic appliance. FIG. 4 illustrates an embodiment of a method of charge processing according to the present invention. The embodiment provides a method of charge processing for computing the charge for the use of a storage medium, wherein an electronic appliance comprises a storage medium which can store information. For example, in the embodiment, two different charges are possible for two types of scenarios for on-demand-music services: (1) for one-time listening of the music transmitted to the electronic appliance, and (2) for multiple listening of the music transmitted and stored onto the storage medium of the electronic appliance. The computation formula determined for the use of a storage medium is used to compute the charge thereof.

[0066] FIG. 11 illustrates an embodiment of a method of charge processing according to the present invention. As shown in FIG. 11, a storage medium, the use of which is the object of charge processing according to the present invention, is built into the electronic appliance. In other words, the electronic appliance is equipped with a storage medium. The storage medium includes a recording medium, which is inserted into the drive of an electronic appliance for recording, such as a DVD disk and a CD-R disk. The method for charge processing herein comprises a means for storing computation formulas, and a step for computing a charge. The embodiment herein is different from other embodiments in that the computation formula stored in the means for storing computation formulas computes the charge for the use of the storage medium.



[0067] FIG. 12 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S1201), and if there is an input, then the information relating to the use of a storage medium is obtained (S1202). In conjunction with the computation formula, this information is used in computing the charge. The corresponding computation formula, which computes the charge for the use of an electronic appliance, is extracted from the means for storing computation formulas (S1203). Next, on the basis of the computation formula extracted in the above step, and the information relating to the use of the storage medium, the charge is computed therein (S1204).

[0068] FIG. 13 illustrates embodiments of an electronic appliance 1301, and a charge processing apparatus 1302 according to the present invention. As shown in FIG. 13, an electronic appliance 1301 comprises a storage medium 1303 for storing information. By way of storing information in this storage medium 1303, information can be reused, rearranged, integrated, and processed for the purposes of implementation of services. The electronic appliance 1301 comprises a transmission unit 1304, and by way of this transmission unit 1304, the information relating to the use of the storage medium 1303 is directly or indirectly transmitted to the charge processing apparatus 1302. The charge processing apparatus 1302 of the present invention comprises a reception unit 1305 for receiving information relating to the use of a storage medium 1303 from the electronic appliance 1301. The information relating to the use of a storage medium 1303 includes information relating to the amount of use of a storage medium 1303, the overall period of use, time, the number of access to information of storage medium, the number of times read in respect to information of storage medium 1303, the number of times processed in respect to information of storage medium 1303, and the reading speed in respect to information of storage medium 1303. The charge processing apparatus 1302 comprises a storage unit 1306 for computation formulas, and a charge computation processor 1307. The storage unit 1306 for computation formulas stores the computation formula for computing the charge for the use of a storage medium 1303. The means 1308 for obtaining a computation formula in the charge computation processor 1307 obtains the computation formula from the storage unit 1306 for computation formulas by means of using information relating to the use of a storage medium 1303 or the like received by the reception unit 1305, and accordingly the charge computation

processor 1307 computes the charge thereof. For example, there may be a computation formula, which charges 10 Yen per day for using 10 mega bytes of storage medium 1303. Further, the computation formula may change according to the types of storage medium 1303. For example, if the storage medium 1303 is a hard-disk drive, the charge may be 1 Yen per day for using 1  
5 mega bytes of storage medium 1303, and 5 Yen per day for using 1 mega byte of RAM. Accordingly, if the charge is 10 Yen per day for using 1 mega bytes of storage medium 1303, the computation formula is as follows: Charge (Yen) = Amount of use of storage medium (mega bytes) x 10 (Yen) x Number of days in use (days).

10 [0069] Below is described the characteristics of parameters used in computing a charge according to the present invention. The embodiment relates to quantifying the aforementioned use of an electronic appliance, functions, operation buttons, and storage medium, and utilizing such quantification in the computation formula. The embodiment quantifies the following factors; the time period of use, the number of times of use, the overall period of use, the location  
15 of use. In particular, 16 combinations as examples are shown in FIG. 14. As a parameter to be used in the computation formula, a combination of two or more variables in FIG. 14 may be used. Based on these combinations, charge processing can be carried out in a flexible manner according to the updates and changes in services. For example, in the case of the use of a function of a picture phone in an electronic appliance, the computation formula may be as  
20 follows: 10 Yen per hour for the time period of use, 5 Yen per hour if the number of times of use is more than five, 30% discount from the total if the overall period of use from the initial subscription has been more than one year, and 20% discount from the total charge if there are two or more locations of use. Further, in the case of the use of an operation button on an electronic appliance for online auctioning of a clothing in a movie shown in said electronic appliance, for  
25 example, the computation formula may be as follows: 5 Yen per minute for the time period of use, 10% discount if the number of times of use exceeds 10 times, 20% discount if the overall period of use exceeds one year, and 5% discount if the location of use is outdoor.

[0070] Below is described an embodiment of a method of charge processing according to the  
30 present invention, which carries out charge processing for the rental of an electronic appliance.

The embodiment involves charging the service provider. First, described is a method of computing a charge for the installation of an electronic appliance. An electronic appliance according to the present invention includes a multimedia terminal or the like, in addition to an electronic appliance comprising a part of a multimedia terminal. An electronic appliance  
5 comprising a part of a multimedia terminal includes a screen display device, a disk as a storage medium, a remote controller button, VRAM (Video RAM), a network interface, or the like of a multimedia terminal. Further, a network interface includes a modem such as an Ethernet interface and a V90 modem, an IEEE 1394 interface, a DV (digital video) terminal and a SD card interface or the like. By way of these apparatuses, service providers then can provide dedicated services.

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[0071] Further, as shown in FIG. 15, the method of charge processing according to the present invention comprises a means for managing identifiers, a means for storing computation formulas, and a means for computing a charge. An embodiment as such is described below. A means for managing identifiers is a means for managing administrator identifiers, each of which identifies  
15 the administrator of an electronic appliance. In particular, an administrator is a service provider, who provides services to a terminal user of a rental electronic appliance. For example, if the service content is a commercial advertisement, the administrator is an advertiser, or if the service is distribution of videos, the administrator is a video rental operator or the like. According to the embodiment shown in FIG. 15, the administrators are A and B. Each administrator identifier is  
20 held in respect to the electronic appliance number specific to each electronic appliance. The means for storing computation formulas stores the computation formula for computing the charge for the installation of an electronic appliance. In this embodiment, a computation formula is stored in respect to each administrator identifier. If the computation formulas are the same irrespective of administrators, it is not necessary to store the computation formula in respect to  
25 each administrator identifier. Next, the step for computing a charge computes the charge in respect to the administrator identified by the administrator identifier on the basis of this computation formula. Moreover, the information relating to installation may be used herein. In the embodiment, the administrator of Administrator Identifier A administers all three electronic appliances, so that the information relating to the installation of these electronic appliances is  
30 utilized during the computation of the charge using the computation formula.

[0072] FIG. 16 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge processing (S1601), and if there is an input, the administrator identifier of an administrator, who is the object of charge (chargee), is obtained (S1602). The administrator identifier may be obtained by way of an input of an administrator identifier to identify the specific administrator at the time of starting charge processing, or it may be obtained from a table of administrator identifiers, held in the charge processing apparatus. For example, in the case of regularly carrying out charge processing in respect to a plurality of administrators as objects of charge processing, it may be carried out according to the administrator identifier numbers held in a table, starting from the smallest number thereof. Next, the information relating to the installation of an electronic appliance associated with the administrator identifier is obtained (S1603). Further, the corresponding computation formula, which computes the charge for the use of said electronic appliance, is extracted from the means for storing computation formulas (S1604). Then, on the basis of the computation formula extracted in the above step, and the information relating to the installation of the electronic appliance, the charge thereof is computed (S1605).

[0073] FIG. 17 illustrates embodiments of an electronic appliance 1701, and a charge processing apparatus 1702 according to the present invention. An electronic appliance 1701 comprises a holding unit 1704 for electronic appliance numbers, and a transmission unit 1703. The holding unit 1704 for electronic appliance numbers holds electronic appliance numbers, each of which is associated with the information relating to the respective electronic appliance 1701. The transmission unit 1703 transmits information relating to the electronic appliance 1701, which is associated with the respective electronic appliance number, to the charge processing apparatus 1702.

[0074] The information relating to the electronic appliance includes information relating to the use of the electronic appliance 1701 and the installation thereof. The information relating to the use of the electronic appliance 1701 includes the status information of activation of functions and operation buttons of the electronic appliance 1701, and the like. The charge processing apparatus 1702 comprises a reception unit 1705, a storage unit 1706 for computation formulas, an identifier

manager 1707, and a charge computation processor 1708. For example, the reception unit 1705 receives information relating to the installation of an electronic appliance 1701 as information associated with the electronic appliance number. An electronic appliance number is uniquely set for each electronic appliance 1701, so that there are no two electronic appliances 1701 having the same number. The information relating to the installation of the electronic appliance 1701, which is associated with the electronic appliance number, is transmitted to the charge computation processor 1708 for charge processing.

[0075] The manager 1707 for administrator identifiers holds the electronic appliance number in respect to the administrator identifier. In this case, “holding it in respect to” means holding them by association or to hold them as a table. By using this association, the manager 1707 for administrator identifiers can extract the administrator identifier 1707 of the administrator of an electronic appliance from the electronic appliance number received by the reception unit 1705. This administrator identifier is passed over to the storage unit 1706 for computation formulas or the charge computation processor 1708, and is used to select the computation formula necessary for charge processing in respect to the administrator. This is so because the computation formula for the charge is provided according to each administrator. Further, in the case of specifying the administrator in advance and carrying out charge processing in respect to said administrator, the charge processing is carried out in such a manner that the administrator identifier is specified at the start of charge processing; the electronic appliance number in respect to said administrator identifier is extracted; and the information relating to the installation of the electronic appliance 1701 is obtained from the electronic appliance 1701 corresponding to this number via the reception unit 1705.

[0076] The storage unit 1706 for computation formulas stores the computation formula for computing the charge for the use and the installation of an electronic appliance 1701. The computation formula is stored in the storage unit 1706 for computation formulas in respect to the administrator identifier since the computation formula of one administrator is sometimes different from that of another. The charge computation processor 1708 comprises a means 1710 for obtaining a computation formula, which obtains the computation formula used for computing

the charge in respect to the administrator from the computation formulas stored in the storage unit 1706 for computation formulas. Further, the charge computation processor 1708 obtains the corresponding administrator identifier from the manager for administrator identifiers, and while associating the computation formula with the administrator identifier, the charge processing is carried out by combining other information relating to the installation of the electronic appliance 1701 received by the reception unit 1705.

[0077] Below is described an embodiment of a method of charge processing according to the present invention, which carries out charge processing for the rental or sale of a function of an electronic appliance. The embodiment relates to a method of charge processing for computing the charge for the rental of a function on an electronic appliance, or for the rental of a function built into the electronic appliance—not for the entire electronic appliance of the user. A built-in function is a function actually mounted onto the electronic appliance, such as a function enabling a flow of commercials of a specific company via an electronic appliance.

[0078] FIG. 18 illustrates an embodiment of a method of charge processing according to the present invention. The embodiment of a method of charge processing according to the present invention comprises a means for managing identifiers, a means for storing computation formulas, and a step for computing a charge. First, the embodiment is characterized by the fact that the means for managing identifiers manages the sub-system administrator identifiers, each of which identifies the administrator of a sub-system implementing a function of an electronic appliance. This is so because the charge is computed on the basis of the rental or sale of each sub-system of an electronic appliance. A sub-system serves to implement a function or a set of functions of an electronic appliance. A plurality of sub-systems is mounted onto the electronic appliance so that a plurality of functions can be implemented on the electronic appliance. Each of these sub-systems has a function identifier, which needs to be associated with the sub-system administrator during charge processing. For example, in the case of pay video viewed by means an electronic appliance, a sub-system may include a system for designating a specific language other than Japanese and voice-switching to the designated language.



[0079] Secondly, the embodiment according to the present invention is characterized by the fact that the computation formula stored in the means for storing computation formulas is a computation formula for computing the charge in respect to the administrator identified by the sub-system administrator identifier. This is so because the computation formula, which is preset for each sub-system administrator administering said function, is required to compute the charge for each function of the electronic appliance. Accordingly, the computation formula, which is stored in the means for storing computation formulas, is associated with the sub-system administrator identifier. The operation of the step of computing a charge is essentially the same as that of the embodiment described previously.

[0080] FIG. 19 is a flowchart of an embodiment according to the present invention. At first, the process involves waiting until there is an input for charge computation (S1901), and if there is an input, then, the sub-system administrator identifier of a sub-system administrator (chargee), which is the object of charge, is obtained (S1902). Next, the function identifier, which identifies the function associated with the sub-system administrator identifier, is obtained (S1903), and the information relating to the built-in function, which is identified by the function identifier, is obtained (S1904). Moreover, the corresponding computation formula is extracted from the means for storing computation formulas, which stores the computation formula for computing the charge for the use of said electronic appliance (S1905). Then, on the basis of the computation formula extracted in the above step, and the information relating to the built-in function of the electronic appliance, the charge thereof is computed therein (S1906).

[0081] FIG. 20 illustrates the functions of an electronic appliance 2001, and a charge processing apparatus 2001 according to the present invention. An electronic appliance 2001 comprises a sub-system for implementing a plurality of functions. According to the embodiment, an electronic appliance 2001 comprises sub-systems (2003, 2004 and 2005) to implement three functions (Function 1 to 3). Further, a function identifier is defined for each sub-system, and it is respectively held in the holding units (2006, 2007 and 2008) for sub-system identifiers. According to the embodiment, a holding unit is provided for each function sub-system. However, function identifiers for three sub-systems may be held at one place. For the purposes of operating

as an identifier capable of being extracted therein, the function identifier may be built-in or preset into the electronic appliance 2001 when the function is installed into the electronic appliance 2001.

5 [0082] A charge processing apparatus 2002 according to the embodiment comprises a reception unit 2010, a storage unit 2011 for computation formulas, an identifier manager 2012, and a charge computation processor 2013. The reception unit 2010 receives information relating to the built-in function, including the function identifier, which is transmitted from the transmission unit 2009 of an electronic appliance 2001, and passes it to the identifier manager 2012 or to the  
10 charge computation processor 2013.

[0083] The identifier manager 2012 extracts the sub-system administrator identifier in respect to the function identifier received from the reception unit 2010, and passes the same to the storage unit 2011 for computation formulas. The storage unit 2011 for computation formulas  
15 stores the computation formula in respect to the sub-system administrator identifier. In the case of carrying out charge processing by presetting the sub-system administrator identifier in advance, the function identifier from the sub-system administrator identifier is specified in the identifier manager, and the information relating to the built-in function is obtained from the electronic appliance 2001 holding the corresponding function identifier.

20 [0084] In the charge computation processor 2013, the means 2014 for obtaining a sub-system administrator identifier obtains the sub-system administrator identifier from the identifier manager 2012. Then, while specifying the subject of charge (chargee) by utilizing the sub-system administrator identifier, the charge processing is carried out by using the computation formula  
25 obtained from the storage unit 2011 for computation formulas by the means 2015 for obtaining the selection of computation formulas.

[0085] Below is described a method of charge processing for the rental or sale of an operation button of an electronic appliance. The embodiment relates to a method of charge processing for  
30 computing the charge for the rental or sale of the rights relating to the use of an operation button



on an electronic appliance, or for the installation of a button onto an electronic appliance—not for the entire electronic appliance of the user. The installation of an operation button for example involves attributing to the operation button on an electronic appliance the exclusive function of moving to a homepage having commercial advertisements of a specified company.

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[0086] FIG. 21 illustrates a method of charge process according to the present invention. As shown in FIG. 21, a method of charge process according to the present invention comprises a means for storing computation formulas, a means for managing identifiers, and a step of computing a charge. The electronic appliance according to the present invention is operated by a remote controller having at least one operation button. First, the embodiment is characterized by the fact that the means for managing identifiers manages the button administrator identifiers, each of which identifies the administrator of a button on a remote controller. Secondly, the embodiment is characterized by the fact that the computation formula, which is stored in the means for storing computation formulas, is a formula for computing the charge for the installation of a button in respect to an administrator identified by the button administrator identifier. FIG. 21 is an embodiment according to the present invention, which carries out charge processing for the installation of two buttons.

[0087] The means for managing identifiers manages the button identifiers in respect to each button administrator identifier so that it is possible to associate (a) with (b), wherein (a) is information relating to the installation of the button associated with the button identifier, and (b) is the administrator of the button identified by the button administrator identifier. Moreover, the means for storing computation formulas manages the computation formulas in respect to the button administrator so that it is possible to associate the respective computation formula with each button administrator identifier. Accordingly, on the basis of the information relating to the installation of a button, the charge processing may be carried out by way of using the respective computation formula corresponding to each administrator of said button.

[0088] FIG. 22 is a flowchart of charge processing according to an embodiment of the present invention. At first, the process involves waiting until there is an input for charge processing

(S2201), and if there is an input, then the administrator identifier, which identifies the button associated with the button administrator identifier, is obtained (S2202). Next, the button identifier, which identifies the button associated with the button administrator identifier, is obtained (S2203). Consequently, the information relating to the installation of the button identified by the button identifier is obtained (S2204). Moreover, the corresponding computation formula is extracted from the means for storing computation formulas, which stores the computation formula for computing the charge for the use of the electronic appliance (S2205). Then, on the basis of the computation formula extracted in the above step, and the information relating to the installation of the button, the charge thereof is computed therein (S2206).

[0089] FIG. 23 illustrates the functions of a remote controller 2301, and a charge processing apparatus 2302 according to the present invention. A remote controller 2301 holds the respective button identifiers for the function buttons (2303, 2304 and 2305) in the holding units (2306, 2307 and 2308) for button identifiers. The information relating to the installation of the button associated with the button identifier is directly or indirectly transmitted to the charge processing apparatus 2302 from the transmission unit 2309. The charge processing apparatus 2302 comprises a reception unit 2310, an identifier manager 2312, a storage unit 2311 for computation formulas, and a charge computation processor 2313. The reception unit 2310 receives information relating to the installation of the button, which is transmitted from the remote controller 2301. The identifier manager 2312 manages the button identifiers in respect to the button administrator identifier. The storage unit 2311 for computation formulas manages the computation formulas in respect to the button administrator identifier, so that the computation formula can be obtained by specifying the button administrator identifier. Accordingly, the charge processing is carried out in the charge computation processor 2313 by using this computation formula. The charge computation processor 2313 comprises a means 2314 for obtaining a button administrator identifier, and a means 2315 for obtaining a computation formula. Then, the charge computation processor 2313 makes association with the button administrator identifier obtained by the means 2314 for obtaining a button administrator identifier so as to carry out charge processing on the basis of the computation formula obtained from the storage unit for computation formulas by the means 2315 for obtaining a computation formula.

[0090] Moreover, while computing the charge for the rental of an electronic appliance, or for the rental of a function or a button, the charge processing may be carried out by using a computation formula with one or more parameters selected from the parameters of the time period of use, the number of times of use, the overall period of installation, and the location. These parameters are included in information relating to the use of an electronic appliance, information relating to the built-in function of an electronic appliance, and information relating to the installation of a button of an electronic appliance. Based on these parameters, the charge processing can be carried out in a flexible manner according to the changes and updates in services as provided.

[0091] Moreover, the aforementioned method for charge processing can be carried out by using a computer readable recording medium encoded with a program for executing such method. In such case, a computer is conceptually inclusive of a charge processing apparatus.

[0092] Below is described a charge processing system for services realized by an electronic appliance.

[0093] FIG. 24 is a functional block diagram of an embodiment of a charge processing system according to the present invention. As shown in FIG. 24, a charge processing system 2400 is a system for carrying out charge processing for services realized by an electronic appliance.

Moreover, the charge processing system 2400 comprises a service provider 2401, a function manager 2402, and a charge processor 2403. The service provider 2401 provides various types of services to a user. In this case, various types of services include services capable of being electronically provided. For example, various types of services include services for video distribution, live broadcasting of baseball games, and on-line game distribution. The function manager 2402 manages the functions of the services provided by the service provider 2401, which involves selecting and enabling the services provided by the service provider 2401. The charge processor 2403 selects an appropriate charging method according to the respective service functions managed by the function manager 2402, and carries out charge processing accordingly. In other words, an appropriate charging method is in effect selected by the function manager 2402 according to the services provided by the service provider 2401. The appropriate charging

method involves selection of a charge, and a means for charging. Moreover, the charge processing herein conceptually includes charge processing in part or in whole. Since charge processing in part may be carried out herein, charge processing for example may include outputting the charge amount, and the means for charging. If they are simply outputted, the final charge processing is carried out via an external apparatus.

[0094] FIG. 25 is a flowchart for a service provider 2501, a function manager 2502, and a charge processor 2503 according to an embodiment of the present invention. As shown in FIG. 25, a service capable of being provided by the service provider 2501 is held therein, which is associated with an identifier. For example, Identifier 01 is associated with a “live broadcast of a baseball game,” Identifier 02 is associated with “news for 24 hours a day,” and Identifier 03 is associated with “information on traffic jam.” If the function manager selects Identifier 01, the service of a “live broadcast of a baseball game” is provided to the user via an electronic appliance. On the other hand, the information, indicating that the service identified by Identifier 01 is being provided, is passed onto the charge processor 2503. The charge processor 2503 as a means for selecting a charging method holds the charge amount and the means for charging, which are respectively associated with the identifier. On account of the provided service identified by Identifier 01, 50 Yen as a charge amount for example is selected, and “on-line payment” is selected as a means for charging. In accordance with this information, the means for executing charge processing carries out charge processing therein.

[0095] Below is described an embodiment of a charge processing system, which collects the use status data of a user, which is information relating to the use status of an electronic appliance by a user. FIG. 26 is a functional block diagram of an embodiment according to the present invention. As shown in FIG. 26, the charge processing system 2600 comprises a collector 2602 for information relating to use, in addition to a service function 2601, a function manager 2603, and a charge processor 2604. The collector 2602 for information relating to use collects the use status data of a user, which is information relating to the use status of a user from an electronic appliance. In this case, the use status data includes information relating to the use of an electronic appliance by a user. For example, it includes information relating to the content, time, and quality,

such as information relating to the use status of the electronic appliance in itself, information relating to the use status of the content via an electronic appliance, and information relating to the distribution of a program via an electronic appliance. The use status data of a user is used for charge processing by the charge processor 2604. In other words, the charge processing system is equipped with a collector 2602 for information relating to use, which collects this use status data. Moreover, the charge processing system selects the charging method according to the use status data of a user, which is collected by the collector 2602 for information relating to use.

[0096] FIG. 27 is a flowchart for a function manager 2701, a collector 2702 for information relating to use, and a means 2703 for selecting a charging method according to an embodiment of the present invention. For example, it is assumed that Identifier 01, as an identifier of a service function, is passed onto the means 2703 for selecting a charging method from the function manager 2701. Moreover, it is assumed that the information as use status data of a user, indicating that the service of Identifier 01 has been used for 90 minutes, is passed onto the means 2703 for selecting a charging method from the collector 2702 for information relating to use. As an example, in the means 2703 for selecting a charging method, the amount for the basic charge for one hour is set to 50 Yen in respect to Identifier 01. In the same way, the means for charging is held as “on-line payment” in respect to Identifier 01. Moreover, the information, indicating that 1 Yen per minute is added as an additional charge after one hour of service, is held in respect to Identifier 01. On the basis of these factors, the charging method is selected therein. The information for the charging method includes information necessary for charge processing, such as the charge amount, in addition to the means of charging. Upon determining this additional charge amount, the embodiment uses the use status data of a user (“service used for 90 minutes”) which is collected by the collector 2702 for information relating to use. In other words, the additional charge is for 30 minutes, i.e., the time period of use over the basic time period of one hour (the basic charge of 50 Yen), so that the additional amount is calculated as follows: 30 minutes x 1 Yen = 30 Yen. On the basis of the operation of the means for selecting a charging method as described above, the means for executing charge processing executes on-line payment with the charge amount of 80 Yen.

[0097] Below is described an embodiment according to the present invention, which collects the use status data of a function in respect to a user, which is information relating to the use status of a user for each function of an electronic appliance.

5 [0098] FIG. 28 is a functional block diagram of an embodiment of a charge processing system according to the present invention. As shown in FIG. 28, the charge processing system 2800 comprises a collector 2802 for information relating to the use of a function, in addition to a service function 2801, a function manager 2803, and a charge processor 2804. The collector 2802 for information relating to the use of a function collects the use status data of a function in  
10 respect to a user, which is information relating to the use status of a user for each function of an electronic appliance. Accordingly, the use status data of a user is the data relating to a function in respect to an electronic appliance. A function (or functions) of an electronic appliance serves to implement various types of services. For example, there may be a function enabling a foreign language audio channel, a function for slow motion, and a function for broadcast recording.  
15 Moreover, according to the use status data of a function in respect to a user, which is collected by the collector 2802 for information relating to the use of a function, the charging method is selected thereby. For example, the function to be realized by an electronic appliance is provided by a specific service provider so that it is necessary for the user to pay a charge to said service provider for using said function. Therefore, by using the use status data of a function in respect to  
20 a user according to the embodiment, the charge per use of a function can be executed therein.

[0099] FIG. 29 is a flowchart for a function manager 2901, a collector 2902 for information relating to the use of a function, and a charge processor 2903 according to the charge processing system of an embodiment of the present invention. As shown in FIG. 29, for example, it is  
25 assumed that Identifier 01 of the service provided to a user via an electronic appliance is passed onto the charge processor 2903. On one hand, it is assumed that the collector 2902 for information relating to the use of a function collects the information, indicating that the function of “broadcast in English” corresponding to Identifier L01 is being used upon receiving the service, which in turn is identified by Function Identifier 01; and this information is passed onto  
30 the charge processor 2903. Accordingly, in the charge processor 2903, the amount for the basic



charge is selected as 50 Yen for example, and the means for charging is selected as “online payment” in respect to the service identified by “01.” On the other hand, the amount for the charge for the function is selected as 20 Yen on the basis of Function Identifier L01, which is collected by the collector 2902 for information relating to the use of a function. According to the selection of the charging method, the means for executing charge processing carries out execution in part or in whole with the charge amount of “50 Yen + 20 Yen,” and with the means for charging of “on-line payment.”

[0100] Below is described a charge processing system according to the present invention, which carries out charge processing by receiving information relating to the installation status of an electronic appliance. The objective of this system is to provide services to an electronic appliance while enabling charge processing according to the installation of said electronic appliance. For example, a manufacturer of an electronic appliance leases an electronic appliance to a user, and another service provider provides services to the rental electronic appliance for the benefit of the user. The user of the electronic appliance pays a charge for the services, and the service provider in turn pays the manufacturer of the electronic appliance since the manufacturer in effect is supplying a basis on which the service provider can provide services to the user via the rental electronic appliance. In this example, a service provider may include an administrator of the service provided via an electronic appliance. Further, the manufacturer of the electronic appliance needs to have a means for computing the charge in respect to this administrator. The means for computing a charge in the charge processing system according to this embodiment is the optimum means for such purpose. In particular, the charge processor in the charge processing system is most appropriate for this purpose.

[0101] FIG. 30 is a functional block diagram of a charge processing system according to an embodiment of the present invention, which describes the charge processor in some detail. As shown in FIG. 30, an electronic appliance managed by a charge processing system comprises managers (3001, 3002, 3003, 3004 and 3005) for electronic appliance numbers, which hold these electronic appliance numbers. The electronic appliance number uniquely identifies an electronic appliance among all the electronic appliances belonging to the charge processing system. Further,

the electronic appliance passes the installation status data of an electronic appliance as information relating to the installation status of the electronic appliance to the charge processing system while associating this data with the electronic appliance number. The installation status data includes information indicating that the electronic appliance specified by at least one  
5 corresponding electronic appliance number is available to the user. A charge processor 3007 comprises a manager 3006 for administrator identification data, each of which identifies the administrator of an electronic appliance. This is so because the object of charge (chargee) is understood in relation to the electronic appliance. The charge processor 3007 associates the administrator identifier (as administrator identification data) with the electronic appliance  
10 number, and holds them in a table.

[0102] The electronic appliance number data, and the installation status data of an electronic appliance as information relating to the installation status of an electronic appliance are received from the electronic appliance. Then, by using the table in which the electronic appliance number  
15 data is associated with the administrator identification data, the charging method according to said administrator identification data is selected, and by using the installation status of the electronic appliance, the charge processing is carried out in respect to the electronic appliance.

[0103] Below is described a charge processing system according to the present invention, which  
20 carries out charge processing by receiving information relating to the built-in function of an electronic appliance.

[0104] Although the charge processing system according to the aforementioned embodiment carries out charge processing on the basis of information relating to the installation of an  
25 electronic appliance, the charge processing system according to the embodiment as below carries out charge processing on the basis of information relating to the built-in function of an electronic appliance. Accordingly, the object of this embodiment is a built-in function of an electronic appliance, instead of its installation status.

30 [0105] FIG. 31 is a functional block diagram of a charge processing system according to an



embodiment of the present invention, which describes the charge processor therein in some detail. As shown in FIG. 31, an electronic appliance comprises a sub-system for implementing a function, and managers (3101, 3102 and 3103) for function identification data of an electronic appliance for each sub-system. The electronic appliance holds the function identification data of the electronic appliance, which identifies the respective sub-system thereof.

[0106] An electronic appliance transmits information relating to the built-in function to the charge processing system while associating it with the function identification data of the electronic appliance. The information relating to the built-in function includes information indicating that the function identified by at least one corresponding function identification data of the electronic appliance is available to the user.

[0107] Moreover, a charge processor 3105 is equipped with a manager 3104 for function administrator identifier data, each of which identifies the administrator of the respective function of the electronic appliance. The electronic appliance receives the function identification data of the electronic appliance, and the built-in function data, which is information relating to the built-in function. The electronic appliance then associates the function identification data of the electronic appliance with the function administrator identification data; selects the charging method according to the function administrator identification data; and carries out charge processing by using the function identification data of the electronic appliance.

[0108] As shown in FIG. 32, the method for charge processing for services realized by an electronic appliance comprises the steps of: providing various types of services to a user (S3201); managing various types of service functions of an electronic appliance (S3202); and selecting an appropriate charging method according to the service function and carrying out charge processing thereby (S3203).

[0109] Moreover, an embodiment, having a recording medium encoded with a charge processing program for carrying out charge processing for services realized by an electronic appliance, comprises the steps of providing various types of services to a user; managing various

types of service functions of an electronic appliance; and selecting an appropriate charging method according to the service function and carrying out charge processing thereby.

[0110] Furthermore, provided is a charge processing program for carrying out charge processing for services realized by an electronic appliance, which causes a computer to execute the steps of: providing various types of services to a user; managing various types of service functions of an electronic appliance; selecting an appropriate charging method according to the service function and carrying out charge processing thereby.

[0111] In the conventional method of charge processing, each service provider was required to carry out charge processing as per service so provided. However, according to the present invention, even in the case of an interactive multimedia service terminal, having customization a plurality of services per each service terminal, it is possible to easily carry out many types of charge processing in respect to one service terminal.

[0112] Moreover, even if the services are provided by a plurality of entities in cooperation, such as content providers, a common carrier, and device providers, the present invention enables easy distribution of profit of service charges derived from said services as per said service provider.

[0113] Moreover, the present invention enables easy installation of an exclusive playback device, a function or a button for commercials in a household environment.

[0114] Moreover, by renting such electronic appliance free of charge from a service provider or portal, a user can enjoy the service which he or she only wants to receive at a low cost. On the other hand, the lender of such electronic appliance may proceed with other business development on the back of the revenue received from the lessee service provider as above.